

## Supplementary Information

Table S1: Species-specific bark thickness regression equations

Species	Equations	r.2
<i>Carya cordiformis</i>	$\ln[B] = -1.56 + 0.416 * \ln[DBH]$	0.226
<i>Carya glabra</i>	$\ln[B] = -0.393 + 0.268 * \ln[DBH]$	0.040
<i>Carya ovalis</i>	$\ln[B] = -2.18 + 0.651 * \ln[DBH]$	0.389
<i>Carya tomentosa</i>	$\ln[B] = -0.477 + 0.301 * \ln[DBH]$	0.297
<i>Fagus grandifolia</i>	$\ln[B] = 1 * \ln[DBH]$	NA
<i>Fraxinus americana</i>	$\ln[B] = 0.418 + 0.268 * \ln[DBH]$	0.256
<i>Juglans nigra</i>	$\ln[B] = 0.346 + 0.279 * \ln[DBH]$	0.246
<i>Liriodendron tulipifera</i>	$\ln[B] = -1.14 + 0.463 * \ln[DBH]$	0.545
<i>Quercus alba</i>	$\ln[B] = -2.09 + 0.637 * \ln[DBH]$	0.603
<i>Quercus prinus</i>	$\ln[B] = -1.31 + 0.528 * \ln[DBH]$	0.577
<i>Quercus rubra</i>	$\ln[B] = -0.593 + 0.292 * \ln[DBH]$	0.087

Table S2: Species-specific height regression equations

Species	Equations	r.2
<i>Carya cordiformis</i>	$0.332 + 0.808 * x$	0.874
<i>Carya glabra</i>	$0.685 + 0.691 * x$	0.841
<i>Carya ovalis</i>	$0.533 + 0.741 * x$	0.924
<i>Carya tomentosa</i>	$0.726 + 0.713 * x$	0.897
<i>Fagus grandifolia</i>	$0.708 + 0.662 * x$	0.857
<i>Liriodendron tulipifera</i>	$1.33 + 0.52 * x$	0.771
<i>Quercus alba</i>	$0.74 + 0.645 * x$	0.719
<i>Quercus prinus</i>	$0.41 + 0.757 * x$	0.886
<i>Quercus rubra</i>	$1.00 + 0.574 * x$	0.755
all	$0.839 + 0.642 * x$	0.857

Table S3: Palmer drought severity index (PDSI) by month for focal droughts and other years referenced in the manuscript

	year	month	PDSI	rank	SPEI.12	rank.1
<b>focal droughts</b>						
	1966	May	-2.98	2	-1.81558	1
	NA	June	-3.40	2	-1.59211	3
	NA	July	-4.08	2	-1.82143	2
	NA	August	-4.82	1	-2.31902	1
	1977	May	-2.96	3	-0.55995	15
	NA	June	-3.28	3	-1.02211	6
	NA	July	-3.61	3	-1.15754	6
	NA	August	-3.68	3	-1.25919	5
	1999	May	-3.63	1	-1.53213	2
	NA	June	-4.21	1	-2.17327	1
	NA	July	-4.53	1	-2.05719	1
	NA	August	-4.64	2	-2.10613	2
<b>others</b>						
	1964	May	-1.08	20	-0.95005	8
	NA	June	-1.97	11	-1.52262	4
	NA	July	-2.46	8	-1.41640	3
	NA	August	-2.98	5	-1.73564	4
	1991	May	-1.79	10	0.72003	39
	NA	June	-2.10	10	0.99093	42
	NA	July	-2.17	10	0.48912	36
	NA	August	-3.06	4	-0.03232	22
	2007	May	-1.37	16	0.56800	32
	NA	June	-1.59	16	-0.23301	16
	NA	July	-2.40	9	-0.46184	13
	NA	August	-2.55	11	0.12468	26

Table S4. Correlation of species' traits with tree height across all individuals in the ForestGEO plot

variable	model	coefficient	p-value
WD	WD~ln[H]	-0.16	0
LMA	LMA~ln[H]	7.86	0
ring porosity	ring porosity~ln[H]	0.34	0
PLA	PLA~ln[H]	1.37	0
TLP	PLA~ln[H]	0.13	0

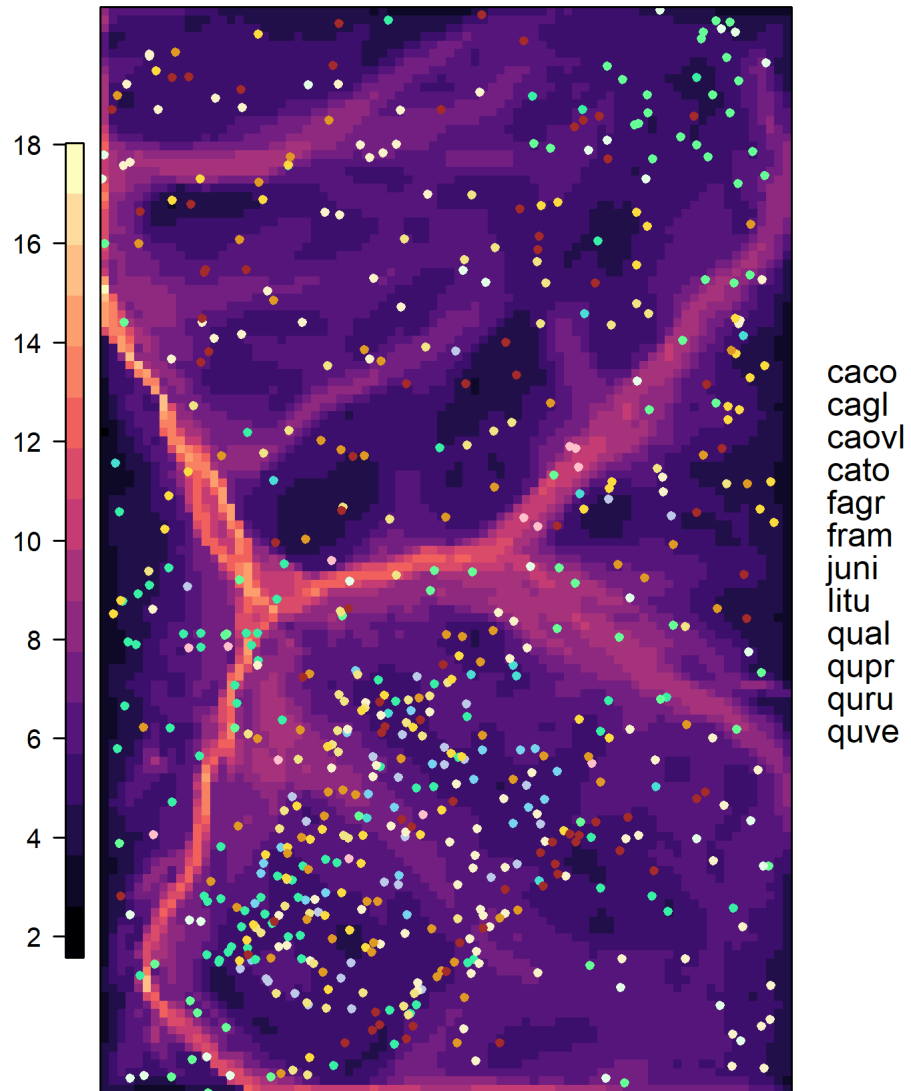


Figure S1: Map of ForestGEO plot showing TWI and location of cored trees

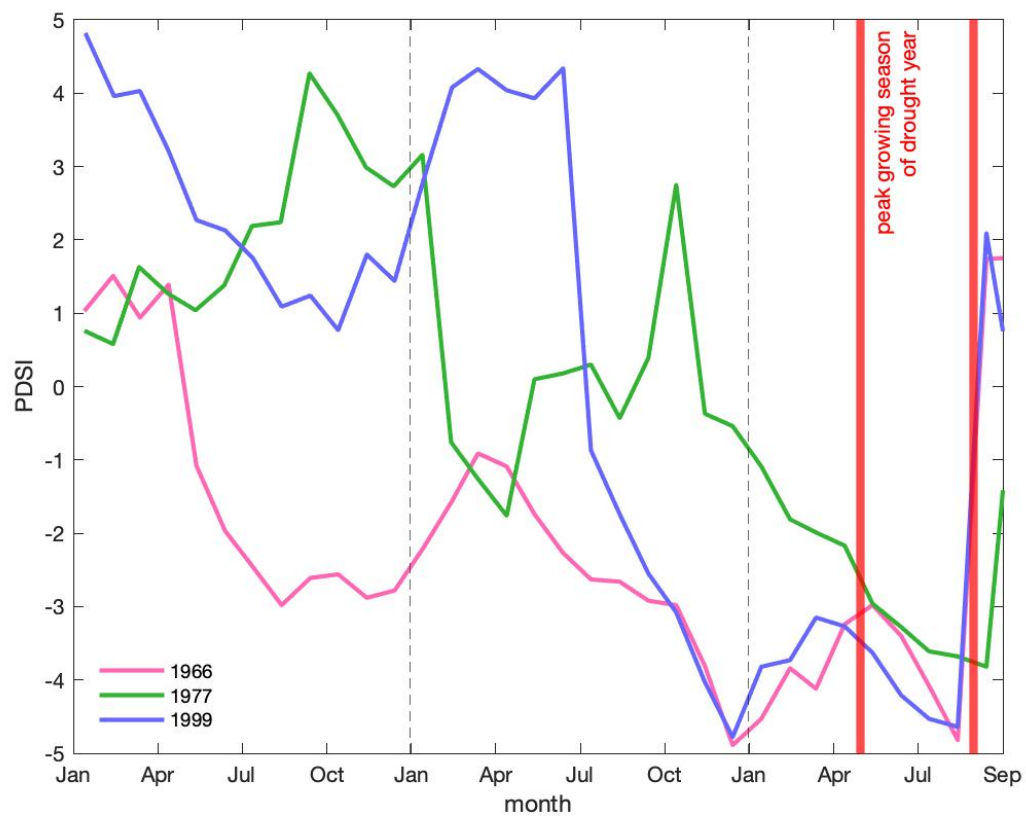


Figure S2: Time series of Palmer Drought Severity Index (PDSI) for the 2.5 years prior to each focal drought

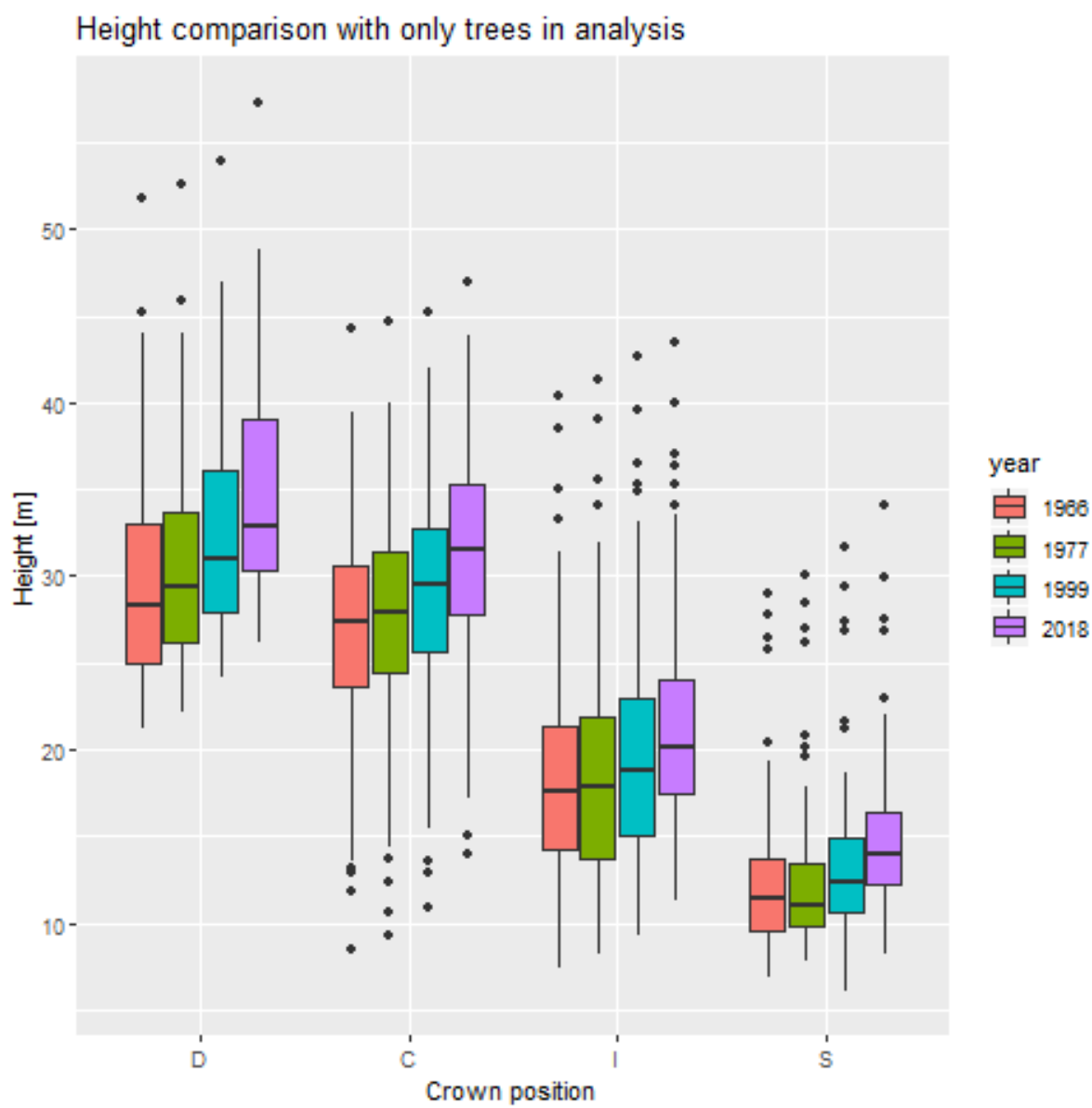


Figure S3: Changes in height by canopy position